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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,439	04/12/2004	Michael Kevin Owens	8285/674	1435
757 7590 04/01/2008 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
EXAMINER				
CLARK, MAXWELL A				
ART UNIT		PAPER NUMBER		
4183				
MAIL DATE		DELIVERY MODE		
04/01/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/822,439

Applicant(s)

OWENS ET AL.

Examiner

MAXWELL A. CLARK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-8 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 1-3, drawn to optical switching, classified in class 398, subclass 45.
- II. Claims 4-8, drawn to circuit protection, classified in class 455, subclass 217.
- III. Claims 9-14, drawn to communication over free space, classified in class 370, subclass 277.

The inventions are distinct, each from the other because of the following reasons:

- 2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are optical switching and circuit protection.
- 3. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are circuit protection and communications over free space.
- 4. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have

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different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are optical switching and communications over free space.

5. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

6. Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.
7. During a telephone conversation with John G. Rauch on the March 25, 2008 a provisional election was made without traverse to prosecute the invention of group 3, claims 9-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

9. Claim 13 is objected to because of the following informalities: The word "end" should be removed from line one of said claim. Appropriate correction is required.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ

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619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 9-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable U.S. Patent No. 6,788,942 in view of 6,415,150.

Regarding claim 9, x942 teaches a system for providing telecommunications service to telecommunications users in a service area, the system comprising: an office-side radio interface unit (claim 1, disclosed as the office interface including a radio); a digital interface unit coupled to the radio interface unit (claim 2, disclosed as the digital signal radio coupled with the cross connect panel); a digital signal cross-connect coupled to the digital interface unit (claim 2, disclosed as the digital signal radio coupled with the cross connect panel); and a subscriber area interface configured for communication with the telecommunications users (claim 1, disclosed as an area interface for

communication with the telecommunications users). X942 does not expressly disclose a digital loop. However x150 discloses a digital loop carrier (claim 4) for the purpose increasing the capacity of the loop. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a digital loop carrier to increase the number of subscribers per loop.

Regarding claim 10, x150 teaches a subscriber-side radio interface unit for radio communication with the telecommunications users (claim 1, discloses as the interface connected to a radio link for communicating to the service area).

11. Claim 11 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 15 of U.S. Patent No. 6,415,150. Although the conflicting claims are not identical, they are not patentably distinct from each other because x150 discloses an office-side connection arranged for communication with a central office, the office-side connection including a first radio interface unit which communicates a first radio signal including a plurality of voice channels for communication between the central office and a plurality of subscribers in the service area and a subscriber-side connection arranged for communication with a telecommunication subscriber, the subscriber-side connection including a second radio interface unit which communicates a second radio signal including a single voice channel for communication between the central office and a single subscriber in the service area (claim 15, disclosed as connecting an area-side radio to a subscriber connector, connecting telecommunications devices via a plurality of subscriber lines to the subscriber connector, creating a radio link between the office-side

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and the area-side radios and directing telecommunications signals between the telecommunications devices and the central office switch via the radio link and the subscriber connection).

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Cooper et al. (USPN 6,181,710).

Regarding claim 9, Cooper discloses a system for providing telecommunications service to telecommunications users in a service area, the system comprising: an office-side radio interface unit (Fig. 8, illustrated as the radio carrying element 230); a digital interface unit coupled to the radio interface unit (col. 10 lines 29-30 wherein the access concentrator corresponds to the digital interface unit coupled to the radio interface unit and col. 4, lines 18-24 wherein the switch is located in the central office, i.e. office side); a digital signal cross-connect coupled to the digital interface unit (col. 12, lines 11-14 and illustrated in fig. 10 elements 150 and 390); a digital loop carrier (col. 9 lines 43-45 wherein the loop carrier corresponds to the wireless local loop. It is inherent

that the wireless local loop is a digital local loop since the wireless technology being used is code division multiple access technique, hence digital); and a subscriber area interface configured for communication with the telecommunications users (col. 14, lines 23-27 and illustrated in fig. 16 and fig. 17 as elements 160 and 170).

Regarding claim 10, Cooper discloses the subscriber side interface comprises a subscriber-side radio interface unit for radio communication with the telecommunications users (col. 14, lines 23-27 and illustrated in fig. 16 and fig. 17 as elements 160 and 170).

Regarding claim 11, Cooper discloses a system for providing telecommunications service to telecommunications users in a service area, the system comprising: an office-side connection arranged for communication with a central office (fig. 16 and 17, illustrated as the back haul network), the office-side connection including a first radio interface unit which communicates a first radio signal (fig. 16 and 17, illustrated as the back haul network), including a plurality of voice channels for communication between the central office and a plurality of subscribers in the service area (fig. 16 and 17, illustrated as the V5.2 interfaces); and a subscriber-side connection arranged for communication with a telecommunication subscriber (fig. 16 and 17, illustrated as the connection between element 160 and elements 170), the subscriber-side connection including a second radio interface unit (fig. 16 and 17, illustrated as the connection between element 160 and elements 170) which communicates a second radio signal including a single voice channel for communication between

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the central office and a single subscriber in the service area (fig. 16 and 17, illustrated as the connection between element 160 and elements 170).

Regarding claim 12, Cooper discloses a multiplexer coupled with the first radio interface unit and the second radio interface unit and which separates the single voice channel for the single subscriber from the plurality of voice channels (col. 3 and 4, lines 53-67 and 1-4 respectively).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper et al. (USPN 6,181,710).

Regarding claims 13 and 14, Cooper illustrates the multiplexer as a five to one used for muxing and demuxing of signals from V5.1, unconcentrated signals, commonly used for subscribers in the PSTN (col.2, lines 39-42) to V5.2,

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concentrated signals (fig. 9, illustrated as element 320, wherein the five to one mux can be used as a three to one mux by not using the 4th and 5th inputs).

Cooper does not expressly disclose the first radio signal / interface unit comprising a DS3 radio signal / radio and the second radio signal / interface unit comprising a DS1 radio signal / radio.

However, Cooper discloses each subscriber terminal (fig. 14, ST-170) supporting 4x32Kbit signal ADPCM signal which requires the radio signal / interface unit between (fig. 14, 170) and (fig. 14, 160) to support at least 128kbit. A DS0 radio signal / interface unit can only support 64kbit leaving the next lowest cost radio signal / interface unit available a DS1 radio signal / interface. Additionally, the PT-PT radio is illustrated as supporting at least 8xV5.2 interfaces (fig. 17), i.e. 16Mbit, which cannot be supported by DS1 radio signal / interface, i.e. 1.544Mbit, leaving the next lowest cost radio signal / interface unit available a DS3 radio signal / interface which can support the illustrated 8xV5.2 interfaces (fig. 17). Hence, it would have been obvious to one skilled in the art at the time of the application to modify Cooper to include the first radio signal / interface unit comprising a DS3 radio signal / radio and the second radio signal / interface unit comprising a DS1 radio signal / radio for the purpose of supporting the data rates that the radio signal / interfaces are required to support at an economical value.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAXWELL A. CLARK whose telephone

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number is (571)270-1956. The examiner can normally be reached on Monday to Thursday 7:30A.M. to 5P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 26, 2008

/Maxwell A. Clark/
Examiner, Art Unit 4183

/Len Tran/
Supervisory Patent Examiner, Art Unit 4183